

**A RADIO ARCHITECTURE FOR USE WITH
FREQUENCY DIVISION DUPLEXED SYSTEMS**

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ABSTRACT OF THE DISCLOSURE

A radio such as a frequency division duplex (FDD) radio (100) has a first local

10 oscillator (LO_{1I} and LO_{1Q}) that is set to coincide with the transmitter section's (126) center frequency or a sub-harmonic thereof. In this way, after the first down-conversion, the transmit interferer is converted to DC, where it can be effectively removed using a simple high-pass filter (110, 112) such as a DC blocking capacitor. Image rejection is achieved by the use of a two-step down-conversion approach that uses quadrature local
15 oscillators to implement a single-sideband down-converter.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20